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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/620,723	07/16/2003	Il-Du Jung	0001376/3062USU	9058

7590 12/13/2005

Paul D. Greeley, Esq.
Ohlandt, Greeley, Ruggiero & Perle, L.L.P.
10th Floor
One Landmark Square
Stamford, CT 06901-2682

EXAMINER

HOPKINS, ROBERT A

ART UNIT	PAPER NUMBER
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1724

DATE MAILED: 12/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/620,723

Applicant(s)

JUNG ET AL.

Examiner

Robert A. Hopkins

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 9-27-04, 5-21-04, 11-24-04, 1-25-05
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Objections

Claims 1 and 15 are objected to because of the following informalities:

Examiner respectfully requests applicant make the following amendments:

In claim 1 line 7 after "prevent" insert -- dust separated from --.

In claim 15 line 14 after "prevent" insert -- dust separated from --.

Examiner notes that page 8 lines 22-23 of the specification recite "so as to prevent a backflow of the dust separated from the air through the air outlet port 122". Therefore the examiner's suggestion is to correct claims 1 and 15 so as to indicate that the dust separated from the air, and not the air itself, is prevented from flowing back through the air outlet port, as indicated by the noted lines in the specification.

Appropriate correction is requested.

Claim Rejections - 35 USC § 112

Claims 1-28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Where applicant acts as his or her own lexicographer to specifically define a term of a claim contrary to its ordinary meaning, the written description must clearly redefine the claim term and set forth the uncommon definition so as to put one reasonably skilled in the art on notice that the applicant intended to so redefine that claim term. *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999). The term "double impeller grill assembly" in claims 1 and 15 is used by the

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claim to mean a first and second grill assembly, while the accepted meaning of impeller is a device that spins air. The grill in the current specification and claims does not spin air, therefore the use of the term "impeller" is contrary to the ordinary meaning. The term is indefinite because the specification does not clearly redefine the term. Claims 2-14 depend on claim 1 and hence are also rejected. Claims 16-28 depend on claim 15 and hence are also rejected.

Allowable Subject Matter

Claims 1-28 would be allowable if rewritten or amended to overcome the rejection under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

The following is an examiner's statement of reasons for allowance:

Claims 1 and 15 recite "a double impeller grill assembly disposed at an upstream portion of the air outlet port in the cyclone body to prevent the air from flowing back through the air outlet port, and having a dual structure comprising an outer grill and an inner grill". Hansen et al(6810557) teaches a cyclone dust collector including a cyclone body, a detachable dust collecting container, a single impeller grill assembly, and a fine dust collecting means at a downstream portion of the single impeller grill assembly. However Hansen et al does not teach a double impeller grill assembly. Taylor(3412529) teaches a gas scrubber including a tangential inlet for a cyclonic airflow and an inner perforate baffle and outer perforate baffle. However Taylor does not teach a dust collecting container or a fine dust collecting means at a downstream portion of a double impeller grill assembly. Also, the dual perforate cylinders of Taylor do not prevent

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material from flowing through the air outlet port, as shown in figure 4. It would not have been obvious to someone of ordinary skill in the art at the time of the invention to provide a double impeller grill assembly disposed at an upstream portion of the air outlet port in the cyclone body to prevent dust separated from the air from flowing back through the air outlet port, and having a dual structure comprising an outer grill and an inner grill because neither Hansen et al nor Tailor suggest such a modification. Claims 2-14 depend on claim 1 and hence are also allowable upon correction of the 112 second paragraph issue. Claims 16-28 depend on claim 15 and hence are also allowable upon correction of the 112 second paragraph issue.

Examiner also notes the references denoted as X and Y references in the French Search Report dated November 25, 2004 do not teach a double grill assembly disposed at an upstream portion of an air outlet port.


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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert A. Hopkins whose telephone number is 571-272-1159. The examiner can normally be reached on Monday-Friday, 7am-4pm, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on 571-272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Rah
December 8, 2005


ROBERT A. HOPKINS
PRIMARY EXAMINER
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